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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,095	11/10/2000	William R. Belknap	ST9-99-180	2856

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EXAMINER

BOCCIO, VINCENT F

ART UNIT PAPER NUMBER

2621

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/709,095

Applicant(s)

BELKNAP, WILLIAM R.

Examiner

Vincent F. Boccio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE & Comm 3/9/06 & RCE 4/5/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2621.

Response to Arguments

1. Applicant's arguments filed 3/9/06 have been fully considered but they are not persuasive.

{A} In re page 10, applicants states, "Aotake, Morimoto and Tonomura, taken individually or in combination, do not teach or suggest marking one or more user or private data fields of one or more scene-change frames of the video to indicate a scene change, in a manner transparent for encoded content within the frame and in order to provide an index of access points for displaying specific scenes or segments." And

"Morimoto assets that there will be almost no degradation in picture quality," which is an admission that its method is not transparent."

First of all, the independent claims are rejected over Aotake in view of Morimoto, which determine patentability of any application.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, it has been deemed obvious to embed marks in frames and to be transparent in the frames the added addition data, which meet the limitation of, "USER OR PRIVATE", data fields (locations), in frames (video) and further to be transparent to viewers.

The definition of transparent, see Webster's Ninth,

- transparent, "having a property of transmitting light without appreciable scattering so that bodies lying beyond are entirely visible", not perfect but, being able to see though.

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- "Fine or sheer enough to be seen through", is also not perfect,
- transparency, "a picture or design on a glass, thin cloth, paper or film designed to be viewed by light shining through it or by projection", is also not perfect.

As taught by the Embedding Rule the desire is to not cause or "almost no degradation in picture quality", therefore, not perfect, but, slightly corrupted or minimal degradation, col. 1, Morimoto et al., which is substantially the same, and clearly meets the limitation of transparent, as claimed.

{B} In re page 10, applicant argues the references individually.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

{B} In re page 10, applicant further states, "Morimoto do not teach or suggest marking user or private fields."

In response if I decide to use a location, can I not call the area a user designated location with associate technique, decided by me the user, in addition the limitation is in the alternative, therefore when a user decides to embed and does not inform anyone, can it not be considered private or only known to the user or some users, a field, is not recited as a VIDEO field, therefore any location reads on a field, even a ball field or any area of a video frame in this case, therefore any video area of any frame.

{C} In re page 10, applicant states, "Morimoto embedding ... makes it difficult to remove embedded information from a motion image."

In response, yes, but as understood firstly not impossible and the examiner believes this is referring to removal not detection, as suggested.

{D} In re page 10, applicant states, "Morimoto does not mark scene change frames to indicate scene change, Morimoto .. avoids embedding addition information, because of the degradation in picture quality."

In response to be more precise, the embedding decision is based on a threshold and states, "there will be the possibility

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that picture quality will be degraded", but, transparent is not perfect and reads on a level of degradation.

How does the invention perform marking in frames, but, somehow does not perform substantially the same degradation or transparent marking in the frames of video, when transparent is not perfectly see though, but slightly noticeable, as claimed????????????????

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 1-14 and 16-29 and 31-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aotake (US 6,411,771) in view of Morimoto et al. (US 6,005,643).

Regarding claims 1, 2-3, 6-7, Aotake discloses and meets the limitations associated with a computer for processing a video stream received, the apparatus and associated method comprising the steps of:

- receiving a video stream, wherein the video stream comprises multiple frames (Fig. 6 a, col. 20);

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- analyzing the video stream to ID scene changes between frames and an encoder (col. 20, "evaluation of a picture subjected to encoding by referencing the frame memory unit 110", "amount of information" or "amount of code as a result of encoding");
- marking with respect to the field or frames of the video stream (col. 4) and wherein the encoder is a compression encoder which compresses a stream into a file on the computer, claim 10.

Regarding claims 1, 3, 7, Aotake, creates an index for the purpose of extracting and displaying or to provide an index of access points for displaying specific scenes or segments Figs. 15, 21 etc....., to identify scenes change point within a video stream,

- but, fails to disclose marking fields of frames of a video and therefore, fails to clearly disclose updating at least a data bit in a field of a video frame, to indicate a scene change.

Morimoto, teaches at col. 1, at "the background of the invention", a method of hiding additional information into a user data field, therefore updating at least one bit, of a video frame field, has generally been employed thereby embedding into a use data field being hidden therefore, alternatively since hidden, reads on a secret or private place or field of an MPEG compressed video stream of frames, the information (message data) may be any information and gives many different examples, wherein this added information can be extracted by processing it with a special program, wherein the original data of the image is slightly changed there will be almost no disturbance in the image and humans will not sense the disturbance, wherein Morimoto the examiner suggests may improve the embedding process by rules, to further improve the embedding to be further without substantial degradation, col. 1, line 55 to col. 5, as taught by Morimoto.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Aotake by incorporating marking fields, being user and/or private type fields of a frame thereby updating the stream with at least one

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marker bit, as taught by Morimoto, without degradation or to be in a manner transparent, when rendering a displaying a marked frame (displayed) to a viewing user, wherein marking field of the frames being user/private, fields of a frame of video versa a separate index, deemed to be an obvious alternative to a separate index file with respect to the video, to mark in user/private field of a video frame to indicate scene changed, to later thereby, detect and render, for the purpose of identification of scene change point in an editing system for intended editing purposes, as taught by Aotake in view of the teachings of Morimoto.

Claims 4-5, 8, have been analyzed and discussed with respect to the claims above.

Regarding claim 9, Aotake discloses indicating the amount a scene has changed in relation to the corresponding scene change point indexed, as taught by Aotake.

It would have been obvious since Aotake generates the additional data for scene changes, wherein Morimoto teaches embedding various additional information being different messages, as suggested by Morimoto, therefore, it would have been obvious to those skilled in the art at the time of the invention to utilize and embed additional data bits, as suggested by the combination of Morimoto and Aotake, to embed the generated data of Aotake in a field, as taught Morimoto representing additional bits generated by Aotake and/or to embed at least some additional data in to the field or more than one bit data, as is obvious to those skilled in the art with these references in front of themselves.

Regarding claims 11-12, Aotake disclose and meets the limitation of wherein a frame of the video file representing a scene change comprises a full frame, Figs. 21 & 24 rendered of or displayed full frames and a DELTA being a frame with large changes, represented by a high threshold, see Aotake (Fig. 19).

Claim 13 is analyzed and discussed with respect to claim 9, further rendering obvious to scan the fields having amount of scene change attribute added thereto and to provide an extraction tool to select frame exceeding an amount of scene change (Aotake, cols. 45-46 and Fig. 19, "exceeding a predetermined threshold value be displayed on the source window

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362. The threshold value is entered by the user"), as is deemed obvious to those skilled in the art.

Regarding claim 14, disclose at col. 10, that either the encoder and decoders can be either software or hardware, but, the combination fails particularly mention wherein the extraction tool access the scene change data in the fields in real time.

Aotake discloses that hardware can be used (col. 10), wherein the examiner takes official notice that, hardware is obviously capable of processing at higher levels, than software, such as real time video processing, therefore, it would have been obvious to those skilled in the art, to playback at in real time or the normal playback speed with respect to the video standard and detect additional field data in real time, as is obvious to those skilled in the art.

Claims 16-29 and 31-44 have been analyzed and discussed with respect to the claims above, but, claims 31-44 represent an article of manufacture, deemed met by the combination with Aotake col. 49, having a program to let a computer process, therefore an article of manufacture or a computer program to facilitate the method with a computer being the hardware.

3. Claims 15, 30 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aotake (US 6,411,771) and Morimoto et al. (US 6,005,643) and further in view of Tonomura et al. (US 6,571,054).

Regarding claims 15, 30 and 45, the combination as applied fails to disclose generating a storybook with the extracted frames.

Tonomura teaches at col. 3, "automatically creates a book like electronic book by a procedure of analyzing a video sequence to detect various events such as a scene change" and col. 10, lines 58-, "Items that can be placed in page are every kind of data that can be managed by a computer, such as text, images, representing images linked to a video and sound data. All the items that are carried on the electronic image book are items numbers for identification ... ", as taught by Tonomura.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the combination by utilizing the scene change frames and creating automatically creating an electronic image book, wherein the book can have

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text, therefore, a story book with extracted scene change images, as taught by Tonomura.

Contact Fax Information


Any response to this action should be faxed to:

(571) 273-8300, for communication as intended for entry,
this Central Fax Number as of 7/15/05

Contact Information

Any inquiry concerning this communication or earlier communications should be directed to the examiner of record, Monday-Tuesday & Thursday-Friday, 8:00 AM to 5:00 PM Vincent F. Boccio (571) 272-7373.

Primary Examiner, Boccio, Vincent
10/1/06


VINCENT BOCCIO
PRIMARY EXAMINER